

US EPA ARCHIVE DOCUMENT

EPA Innovative Energy Management Workshop

Third Party Contract Agreements



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Hilo, Hawaii

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Overview

- **The Energy Environment**
- **The True Cost of Electricity**
- **The Energy “Profit Center”**
- **Financing Energy Projects**

Energy Environment

Business could save more energy

Experts say most aren't doing nearly enough to improve efficiency

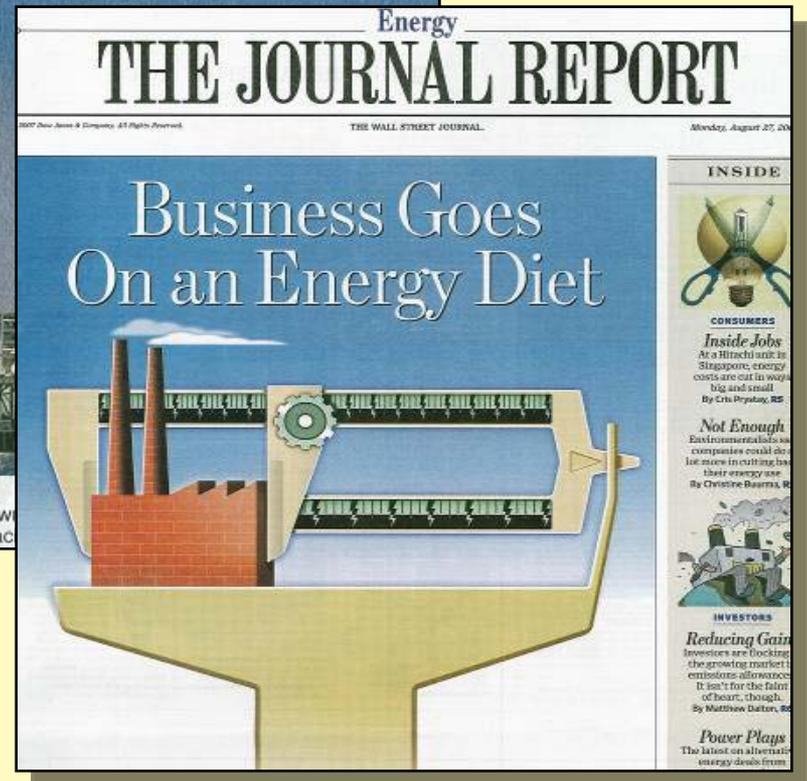
BY CHRISTINE BURMA
Wall Street Journal

Businesses may be making some progress in implementing energy-efficiency measures, but most have a long way to go, environmental advocates say. Many companies have not even undertaken the most simple energy-saving steps, such as installing more efficient fluorescent lighting and optimizing their air-conditioning systems, these groups say.

"Companies are leaving a lot of opportunities on the table," says Mark Brownstein, the managing director of business projects for the climate and air program at Environmental Defense, a New York-based environmental group. Adds David Hamilton, global



The Baytown Olefins chemical processing plant, in Baytown, Texas, has won the 2007 Dow Jones & Company's Best Plant Award for its co-generation facility.



"Most managers are so caught up in the day-to-day operations that they do not have the time to think about energy efficiency."

The Energy Environment

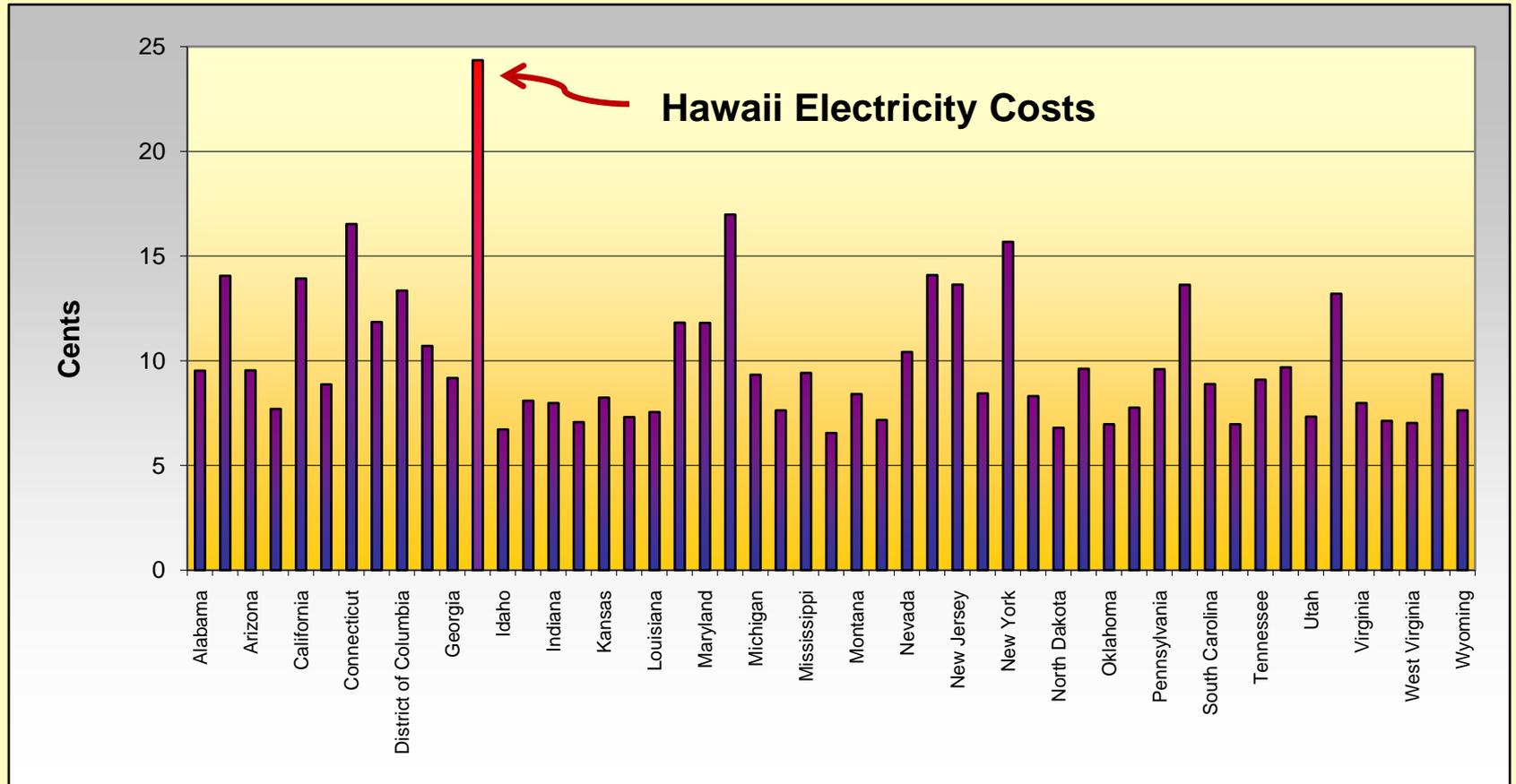
- **American Recovery and Reinvestment Act of 2009 (ARRA 09)**
- **Energy Policy Act of 2008 (EPACT 08)**
- **Hawaii Clean Energy Initiative (HCEI 08)**

The Energy Environment



Fuel Surcharges on the Rise Again

Average kWh Costs by State - 2009



Source

The True Cost of Light

100 Watt Incandescent Lamp: 50¢



24/7/365

Electricity for 1 year:

| | | |
|------------|----------|---------|
| Idaho | 3¢/ kWh | ➤ \$ 25 |
| Washington | 8¢/ kWh | ➤ \$ 75 |
| California | 12¢/ kWh | ➤ \$100 |
| Oahu | 23¢/ kWh | ➤ \$200 |
| Maui | 34¢/ kWh | ➤ \$300 |
| Kauai | 45¢/ kWh | ➤ \$400 |

The True Cost of Power

10 Horsepower Electric Motor: \$1,000



Electricity for 1 year:

| | | |
|-------------|----------|-----------------|
| Idaho | 3¢/ kWh | \$ 2,000 |
| Washington | 8¢/ kWh | \$ 5,000 |
| California | 12¢/ kWh | \$ 8,000 |
| Oahu | 23¢/ kWh | \$15,000 |
| Maui/Hawaii | 34¢/ kWh | \$22,000 |
| Kauai | 45¢/ kWh | \$29,000 |

The True Cost of Power

10 Horsepower Electric Motor: \$1,000



24/7/365

Simple Math:

Total system cost: \$ 2,000

Annual electricity cost: \$15,000

Cost of premium upgrade: \$ 1,000

10% annual savings: \$ 1,500

Total cost saving (10 yrs): \$15,000

**\$1,000 of additional cost
yields \$15,000 of Savings**

Lights



Sensors



Controls



Pumps



VFDs



Compressors



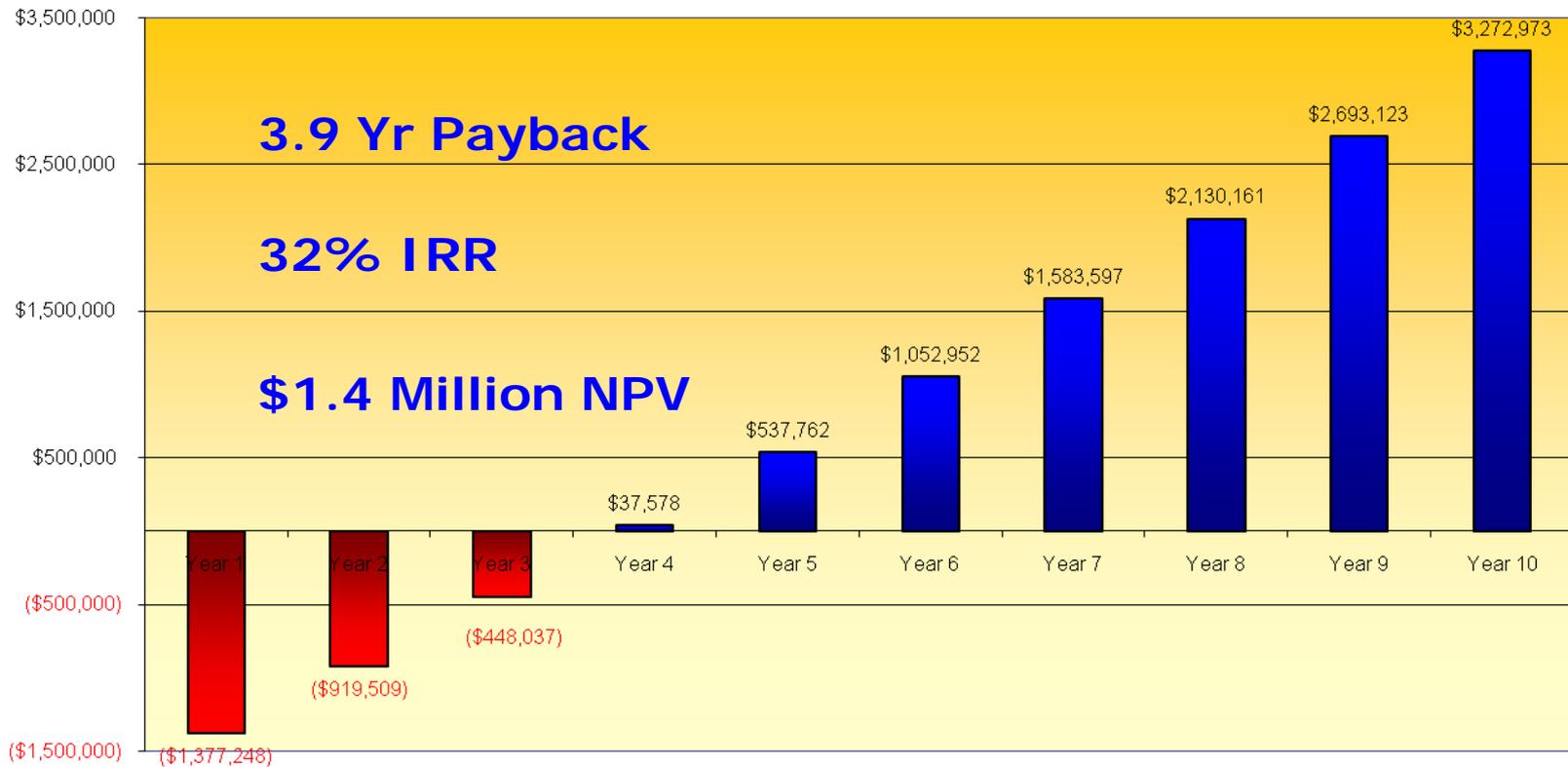
Chillers



PV

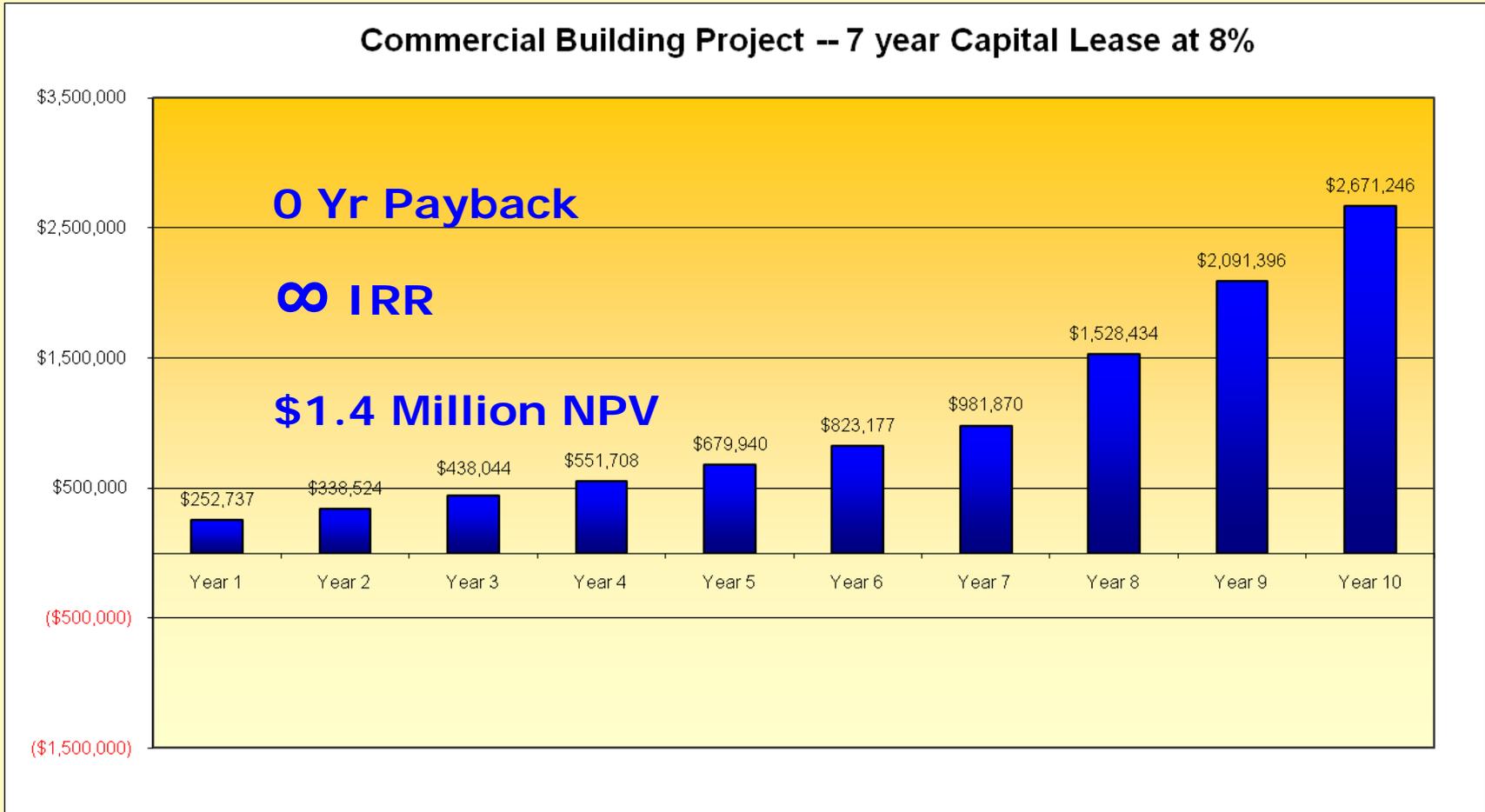
The Energy “Profit Center”

Commercial Building Project without Financing



The Energy “Profit Center”

Commercial Building Project -- 7 year Capital Lease at 8%

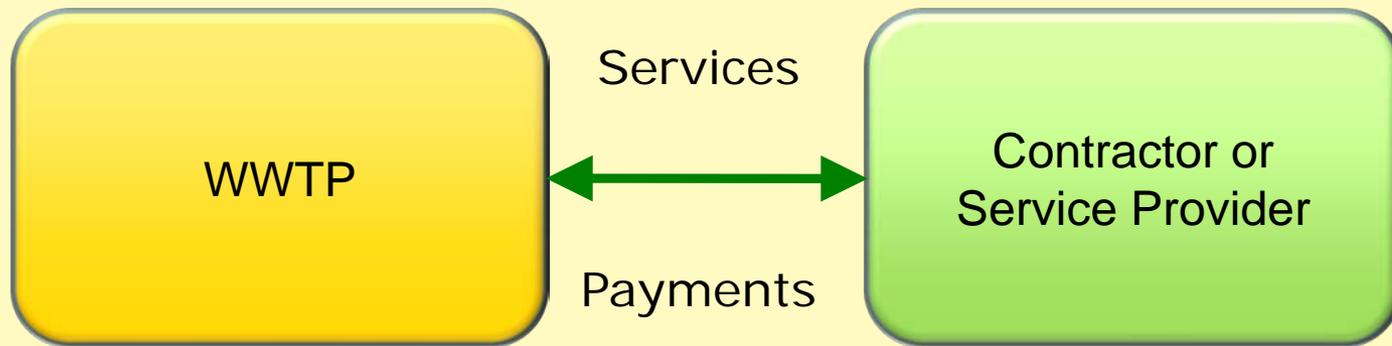


The Energy “Profit Center”

Annual Cash Flow

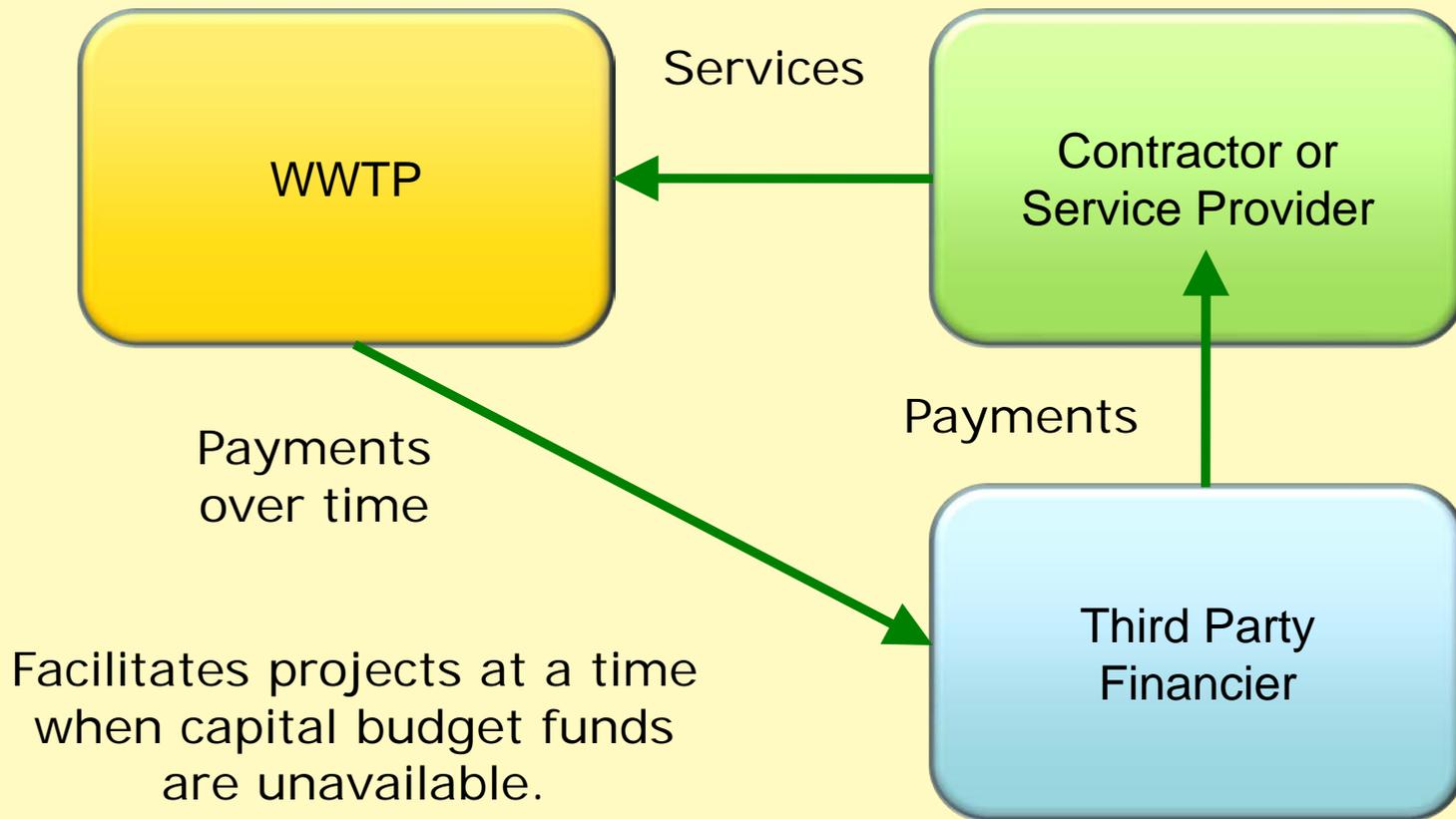
| | |
|-------------------------------|-----------------|
| ■ Annual Utility Bill Savings | \$444,000 |
| ■ Annual Lease Payments | \$372,000 |
| | <hr/> |
| | \$72,000 |

Third-Party Financing



Usually, work is performed under "bid & spec" procurement program when capital budgeting funds are available.

Third-Party Financing



Third-Party Financing

- Term Loans
- Equipment Financing
- Municipal Financing
- UESC – Utility Energy Services Contract
- PPA – Power Purchase Agreements
- ESPC – Energy-Saving Performance Contracts

Equipment Finance

- Term Loan
 - Traditional Borrowing
 - Corporate / Private Sector
 - Credit review
 - Collateral & Guarantees

Equipment Finance

- Capital Lease
 - User-Owned Asset
 - Simplified Credit Review
 - \$1 “Buyout” at End of Term
 - Asset is Collateral

Equipment Finance

- Operating Lease
 - Lender-owned Asset
 - Monthly Expense
 - Fair Market Value Residual
 - Off-Balance Sheet Transaction

Equipment Finance

- Municipal Lease
 - State / City / Nonprofit
 - Tax Exempt – like SPRB
 - Government's credit for underwriting
 - Non-appropriation clause

UESC

Utility Energy Services Contract

- Utility pays for infrastructure upgrades
- Long-term contract with Utility
- Repayment through utility bills
- Customer satisfaction program

PPA

Power Purchase Agreement

- Long-term renewable energy
- Third-party owns asset
- Third-party takes incentives
- User purchases power from system
- Future – purchase BTUs

ESPC

Energy Savings Performance Contracts

- ESCO – Energy Services Companies
- Governmental / Institutional / DoD
- Large, multi-facility program
- Design-Build-Maintain program
- G-Max / Guaranteed Savings

ESPC

State Performance Contracting Program

- DAGS Program – ESCO list
- State/C&C/Quasi-Governmental
- Replacement & maintenance
- Municipal financing
- Long-term agreements

Summary

- The energy environment is ripe for action.
- The true cost of electricity is a critical driver.
- Energy efficiency can be made into a “Profit Center”.
- Financing will facilitate the implementation of energy programs.
- Innovative programs are readily available.
- Knowledge and information is the key to successful energy financing.

...Questions?

THANK YOU



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